

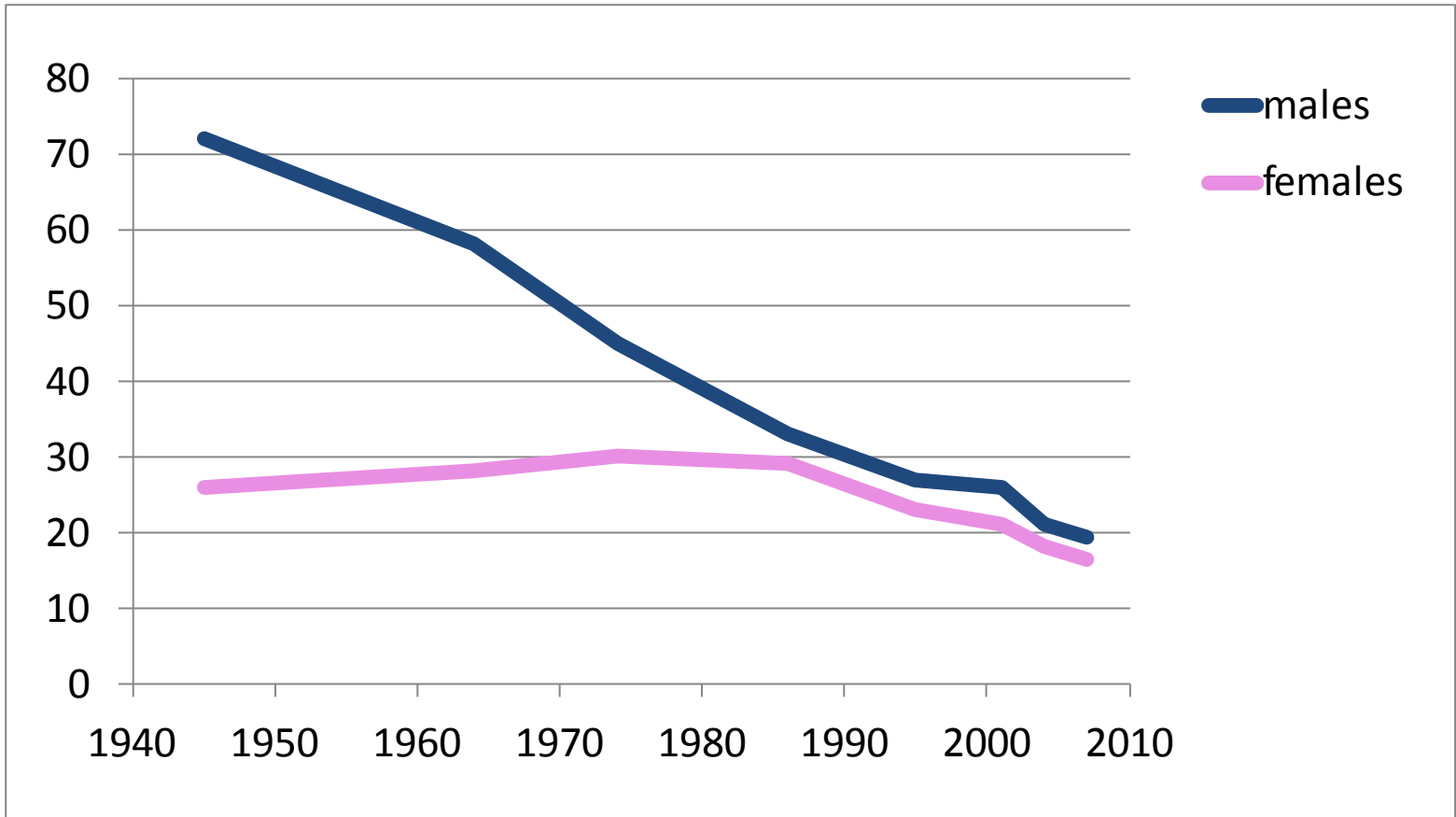
# Tobacco Smoking and Illicit Drug Use in Australia

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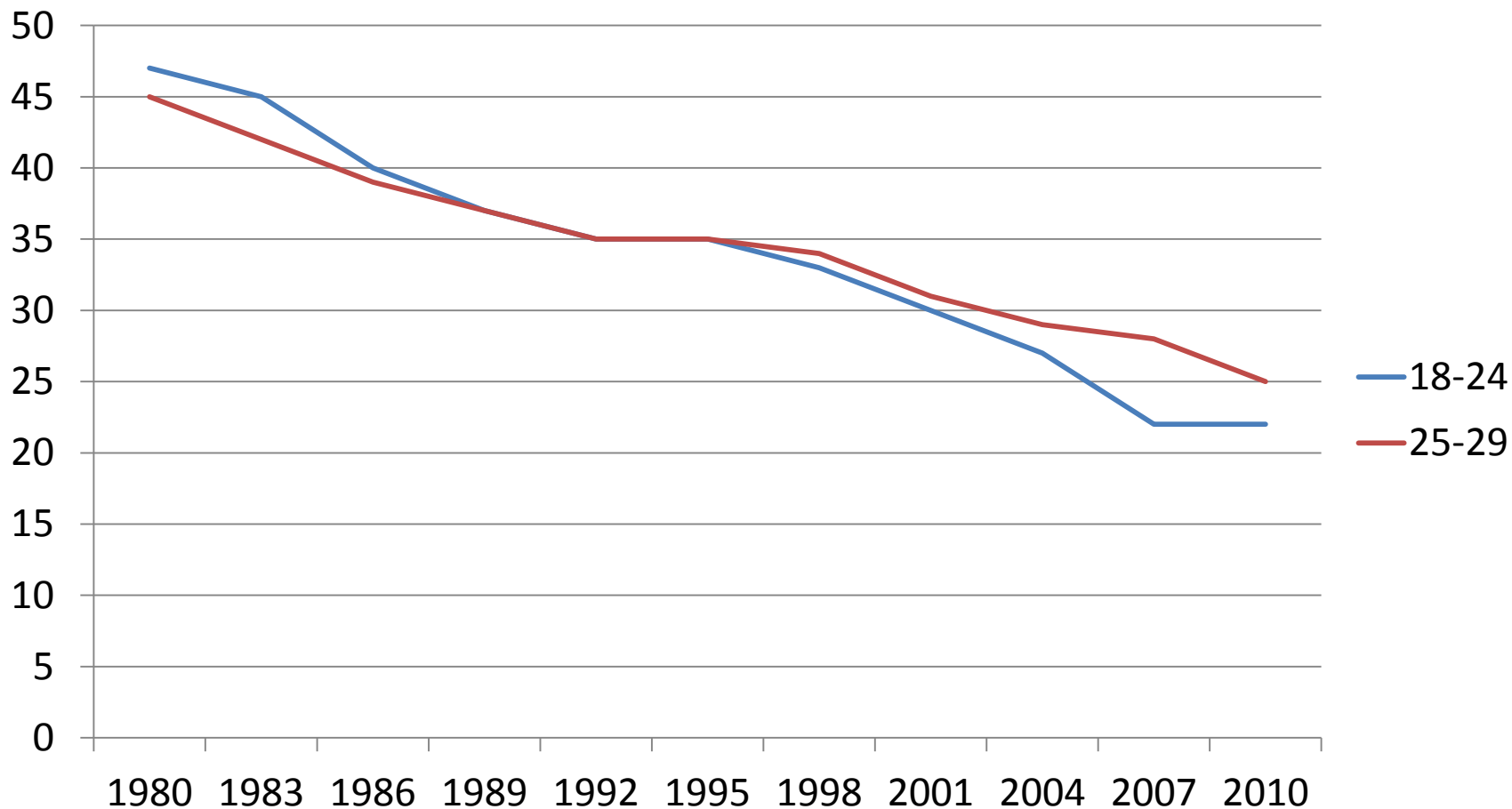
# Outline of Talk

- Long term smoking trends: 1945-2010
- Recent trends: 1980-2010
  - Convergence in prevalence men and women
  - Social class trends in prevalence
  - Mental health and smoking
- Tobacco use among illicit drug users
  - Party drug users and tobacco smoking 2001-2010
- Explaining these relationships
  - Patterns of illicit drug involvement
  - Are party drugs going downmarket?
  - Smoking as a marker of rebellion and risk taking
- What should be done?

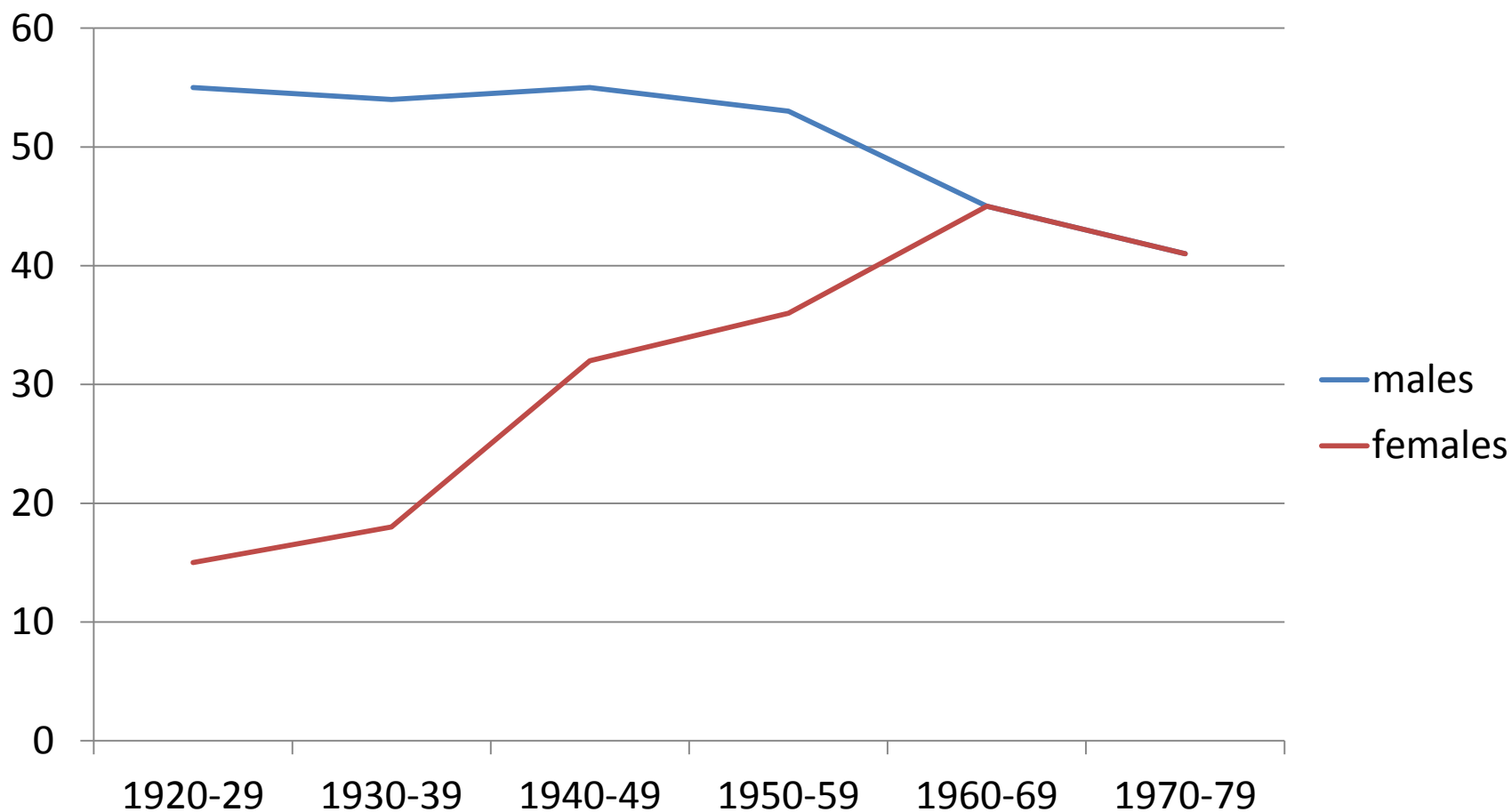
# Smoking prevalence in Australia 1945-2010



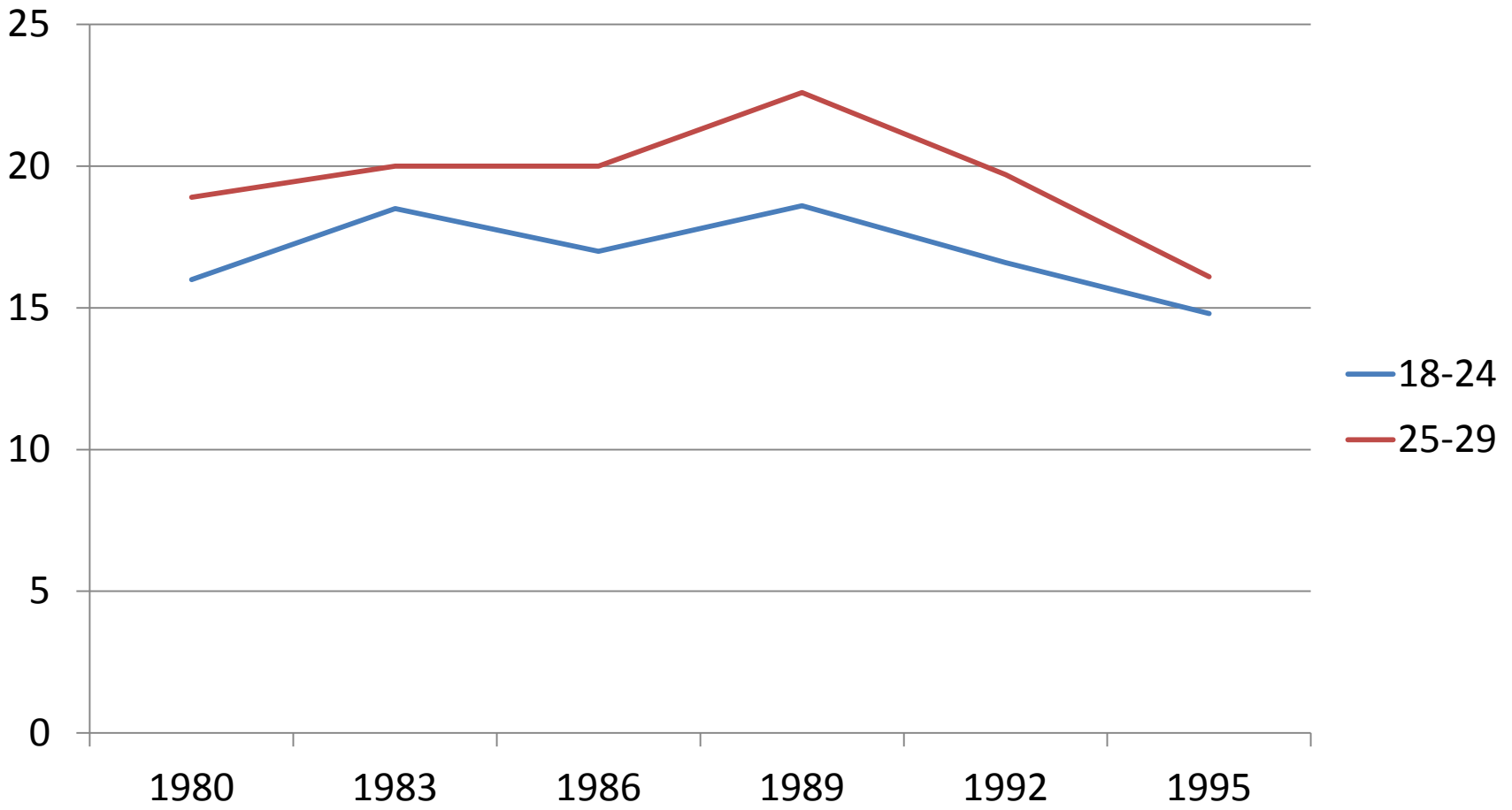
# Trends in young adult smoking prevalence 1980-2010



# Daily smoking rates by birth cohort



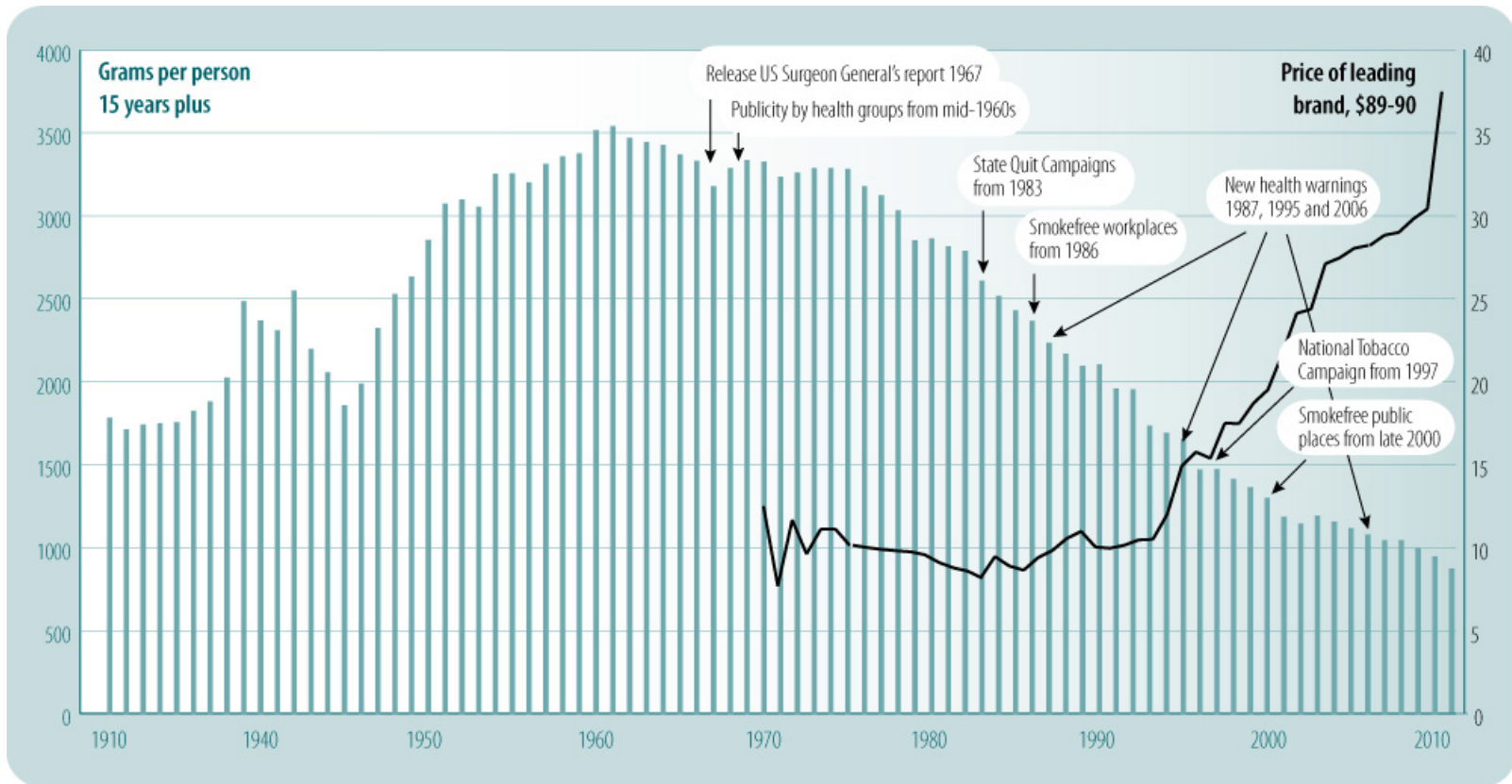
# Average number of cigs per day among smokers 18-29 years, 1980-2010



# What policies have reduced smoking?

- Taxation increases on tobacco:
  - per stick since 1992
- Restrictions on smoking
  - Workplaces late 1980s; public places, 1990s
- Bans on advertising and promotion
- Quit lines & media campaigns: Cancer councils
- Most cost effective policies:
  - Taxation
  - Advertising bans
  - Smoking bans in workplaces and public places

# Trends in tobacco consumption and public health policies





# Relationship between tobacco sales and prices. 1970-2005



# Smokers' characteristics 1997-2007

Mathews et al, 2010

- National Surveys of Mental Health and Well-Being
  - Household surveys in 1997 and 2007
- In both surveys smokers were more likely to:
  - Be socially disadvantaged
  - Less well educated
  - Report symptoms of psychological distress
  - Have anxiety and affective disorders
  - Have an alcohol or other drug use disorder

# Have smokers “hardened” 1997-2007?

- Have smokers become more:
  - nicotine dependent
  - social disadvantaged
  - mental distressed?
- Very little evidence of hardening:
  - Small increase in social disadvantage
  - But not for dependence or comorbid disorders
    - Average N cigs per day has decreased
    - No increase in psychological distress
    - No increase in prevalence of other mental disorders

# Smoking and illicit drug use 2001-2010

- How are smoking and illicit drug use related?
- Have these relationships changed 2001-2010?
- Used NDS surveys for 2001 and 2010 to examine:
  - Prevalence of smoking in young adults
  - Relationship to illicit drug use
  - Adjusting for sociodemographic differences

# Analyses

- National Drug Strategy Household Survey
  - 27 000 respondents across Australia
  - Weighted to Australian population
- Analysis of smoking rates in Surveys in:
  - 2001 and 2010
  - Among young adults (18 – 29 years old)
- 3 categories of illicit drug user
  1. Party drug users (excluding injectors)
  2. Other illicit drug users (including injectors)
  3. Non users

# Drug use categories

- 'Party' drug users: 10.5% of young adults
  - Any ecstasy, cocaine or GHB use in the last 12 months
  - never injected drugs
- 'Other' illicit drug users: 6.5% of young adults
  - Any use in last 12 months of:
    - meth/amphetamines, inhalants, heroin, pain killers, tranquilisers, methadone, hallucinogens, and opiates
  - not used party drugs in last 12 months
- Non users of illicit drugs: 83% of young adults
  - Not used any illicit drugs in the last 12 months
  - Never injected drugs

# Drug user characteristics

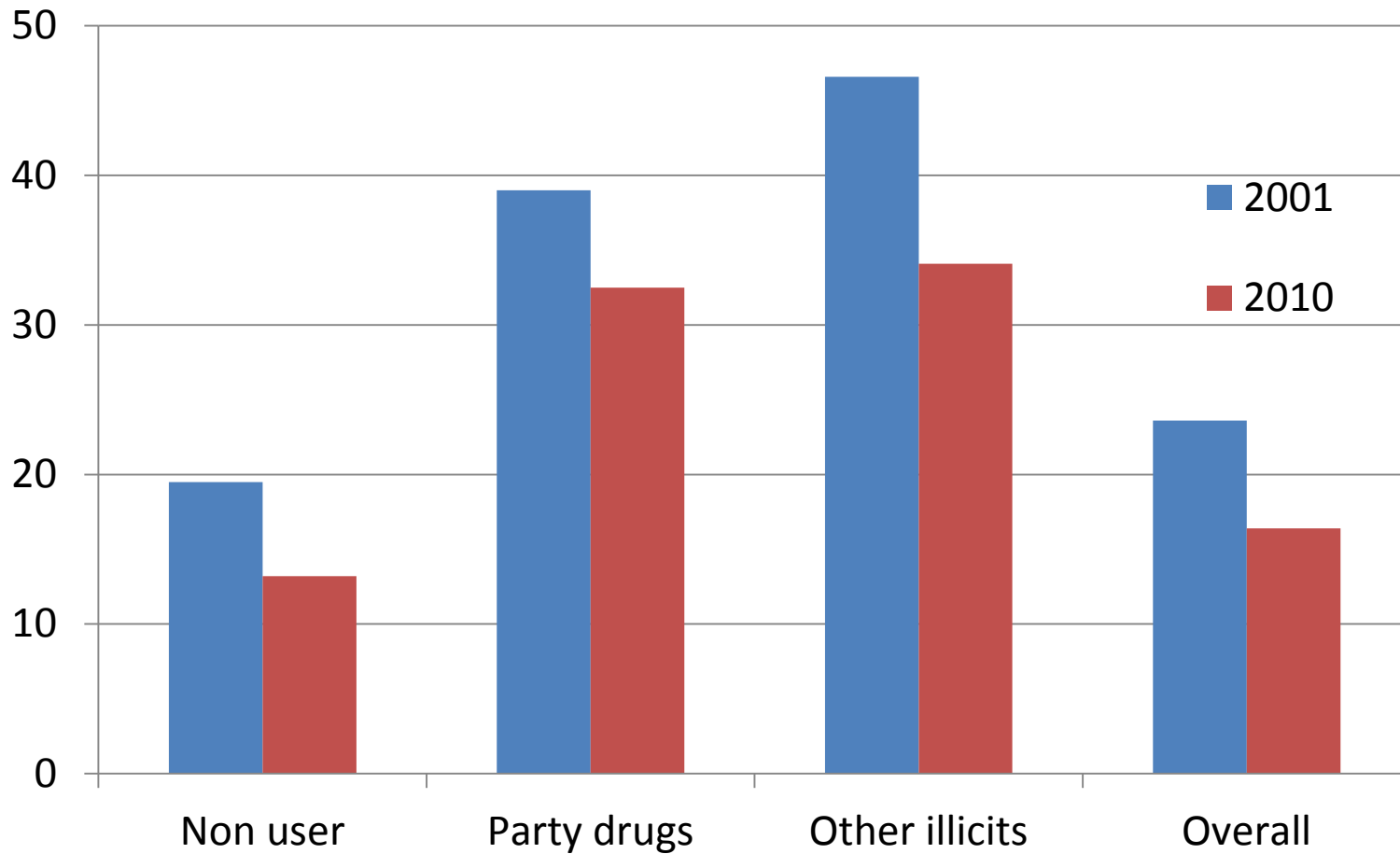
|                  | 2001          |                 |                    | 2010          |                 |                    |
|------------------|---------------|-----------------|--------------------|---------------|-----------------|--------------------|
|                  | Non users (%) | Party drugs (%) | Other illicits (%) | Non users (%) | Party drugs (%) | Other illicits (%) |
| <u>SES</u>       |               |                 |                    |               |                 |                    |
| Lowest           | 17            | 9               | 20                 | 18            | 11              | 25                 |
| Second           | 27            | 19              | 29                 | 19            | 16              | 17                 |
| Third            | 20            | 22              | 18                 | 20            | 17              | 18                 |
| Fourth           | 14            | 16              | 17                 | 23            | 23              | 20                 |
| Highest          | 23            | 34              | 16                 | 21            | 34              | 21                 |
| <u>Sex</u>       |               |                 |                    |               |                 |                    |
| Female           | 51            | 42              | 47                 | 51            | 42              | 45                 |
| Male             | 49            | 58              | 53                 | 49            | 58              | 55                 |
| <u>Education</u> |               |                 |                    |               |                 |                    |
| Bachelor+        | 21            | 24              | 13                 | 26            | 24              | 18                 |
| Year 12          | 32            | 33              | 24                 | 31            | 33              | 27                 |
| Cert/dip         | 33            | 31              | 38                 | 31            | 33              | 36                 |
| < year 12        | 15            | 11              | 25                 | 11            | 10              | 18                 |

# Sociodemographic Trends

- Majority of party drug users male
- Party drug users higher SES and more education than:
  - Nonusers of illicit drugs and
  - Users of other illicit drugs
- Patterns consistent from 2001 to 2010



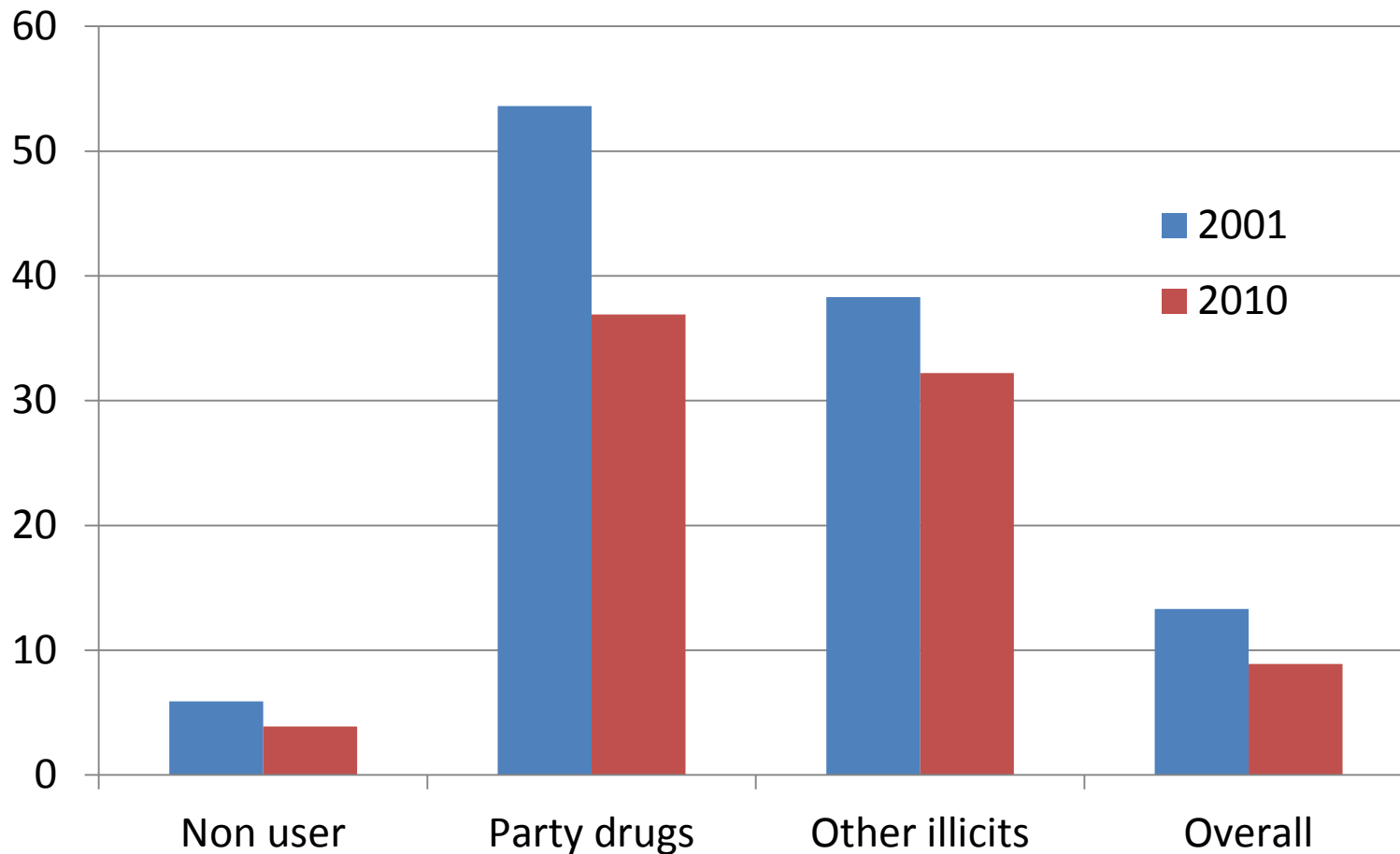
# Proportion of drug users who smoke daily



# Demographic correlates of daily smoking

| Variable                 | Model 1 | OR (95% CI)      | p Value |
|--------------------------|---------|------------------|---------|
| SES                      |         | 0.92 (0.87-0.97) | .001    |
| <u>Year</u>              |         |                  |         |
| 2001                     |         | 1.00             |         |
| 2010                     |         | 0.65 (0.56-0.75) | < .001  |
| <u>Drug use category</u> |         |                  |         |
| Non user                 |         | 1.00             |         |
| Party drugs              |         | 4.26 (3.45-5.26) | < .001  |
| Other Illicits           |         | 3.57 (2.79-4.57) | < .001  |
| <u>Sex</u>               |         |                  |         |
| Female                   |         | 1.00             |         |
| Male                     |         | 1.14 (0.99-1.32) | .079    |
| <u>Highest education</u> |         |                  |         |
| Bachelor or higher       |         | 1.00             |         |
| Year 12                  |         | 1.99 (1.55-2.55) | < .001  |
| Cert/Dip                 |         | 3.41 (2.69-4.33) | < .001  |
| < year 12                |         | 5.70 (4.36-7.44) | < .001  |

# Proportion of drug users who use cannabis at least monthly



# Predictors of daily smoking

| Variable                 | Model 2 - including cannabis |         |
|--------------------------|------------------------------|---------|
|                          | OR (95% CI)                  | p Value |
| SES                      | 0.93 (0.88-0.98)             | .007    |
| <u>Year</u>              |                              |         |
| 2001                     | 1.00                         |         |
| 2010                     | 0.68 (0.59-0.79)             | < .001  |
| <u>Drug use category</u> |                              |         |
| Non user                 | 1.00                         |         |
| Party drugs              | 2.42 (1.90-3.08)             | < .001  |
| Other Illicits           | 2.41 (1.85-3.14)             | < .001  |
| <u>Sex</u>               |                              |         |
| Female                   | 1.00                         |         |
| Male                     | 1.02 (0.88-1.18)             | .823    |
| <u>Highest education</u> |                              |         |
| Bachelor or higher       | 1.00                         |         |
| Year 12                  | 1.88 (1.46-2.42)             | < .001  |
| Cert/Dip                 | 3.31 (2.60-4.22)             | < .001  |
| < year 12                | 5.26 (4.00-6.91)             | < .001  |
| <u>Cannabis use</u>      |                              |         |
| Never/infrequent         | 1.00                         |         |
| At least monthly         | 4.19 (3.35-5.25)             | < .001  |

# Explanations

- Natural history of drug involvement
  - Cigarettes, alcohol, cannabis and other illicit drugs
- Shared social trajectory
  - Smoking and party drugs both going down market?
- Smoking as a social marker of rebellion
  - Back to the future

# Patterns of Drug Involvement

- “Gateway” sequence of involvement
  - Alcohol &/or tobacco precede cannabis
  - Cannabis use precedes pills and powders
  - Pills and powders precede heroin and IDU
- Predictors of progression
  - Early initiation of any drug
  - Heavier use of any drug predicts progression
- Earlier drug use patterns usually retained
  - Later drugs usually added to repertoire
  - Producing a Guttman scale of drug involvement

# Patterns of Drug Involvement

- Key role for cigarette smoking
- “Gateway” to cannabis use:
  - Route of administration effect
  - Reverse gateway now seen in Australia
- Cannabis use and other illicit drug use
  - Heavier users more likely to use party drugs
- This pattern predicts:
  - Higher rates of smoking among party drug users

# Are party drugs going down market?

- Cigarette smoking
  - Has been going down market for over 20 years
  - reduced uptake and higher cessation among higher SES
- What about party drugs?
  - First used by better educated, often during higher education
- Social trajectory of cannabis, LSD, & cocaine
  - *avant garde* → college students → middle class → blue collar
- Little evidence of this between 2001-2010:
  - SES and education remained stable for party drug users



# Cigarette smoking as a marker of rebellion

- In the 1890s and 1900s
  - Cigarettes, larrikinism & antisocial behaviour
  - Strongly disapproved of by male pipe smokers
- The World Wars and acceptance of smoking:
  - WW-I normalised RYO smoking
  - WW-II did the same for manufactured cigarettes
- As smoking prevalence has declined:
  - Renewal of smoking as mark of rebellion?
  - Drug used by risk takers and sensation seekers
  - Who are more likely to use illegal drugs

# What should be done?

- Should we pay more attention to cigarette and cannabis smoking among illicit drug users?
- If so, how?
  - Advice on the risks of smoking?
  - Promotion of smoking cessation aids?
  - Tobacco harm reduction advice?
  - Cannabis harm reduction advice?

# Acknowledgements

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